

DIVISION 1 – GENERAL REQUIREMENTS  
Section 01533: Tree and Plant Protection  
**SECTION 01533: TREE AND PLANT PROTECTION**

**PART 1 – GENERAL**

1.01 SUMMARY

This section includes administrative and procedural requirements for the protection of trees, shrubs, and plant material not designated for removal. Such trees, shrubs, and plant materials shall be left in place and protected from damage or injury by the Contractor during construction using full and adequate methods of protection.

1.02 RELATED SECTIONS

Requirements of Section 02200 Site Clearing and Demolition and other Division 2 sections apply to protection of trees, shrubs, and plant materials.

1.03 DEFINITIONS

- A. Drip line: The outer edge of the tree canopy.
- B. Critical root zone: A circle around the tree trunk whose radius (in feet) is equal to the diameter of the tree trunk (in inches) as measured at breast height.

**PART 2 – PRODUCTS**

Not Used.

**PART 3 – EXECUTION**

3.01 PROTECTION WITHIN DRIP-LINE

- A. Where existing trees to remain are within the area of work, or where existing trees outside the area of work have drip-lines extending into the area of work, the Contractor shall employ methods to minimize adverse impact to all parts of these existing trees including limbs and roots. The Contractor shall notify the

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Engineer of any construction work within the drip-line of trees at least one working day before the scheduled activity. Methods or minimizing adverse impact may include:

1. Temporary construction fencing
2. Temporary tie-up of low limbs
3. Application of a 4- to 6-inch thick layer of mulch (or wood chips salvaged from clearing and grubbing operations) within the drip-line of trees
4. Timber or steel planking for protection of surface roots from equipment
5. Tree root pruning or other tree root treatment as directed by the Engineer, and with the assistance of the City Arborist, for roots two inches in diameter or larger
6. No storage of equipment or materials shall be allowed within the drip-line of trees not designated for removal. Steel or timber planking made of 4-inch thick material, each plank covering a minimum of eight square feet, shall be used to support backhoe and other equipment when set within the drip-line of a tree or sodded planting strip.
7. Where excavation or pavement removal or placement operations occur that impact tree roots two inches or greater in diameter, the Engineer, with the assistance of the City Arborist, will determine how these tree roots are to be handled.

### 3.02 ABOVE-GRADE WORK

- A. Tree removal or tree trimming within 10 feet of any overhead utility line requires the Contractor to make notification to the appropriate utility company.

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- B. When the Contractor anticipates construction operations that will unavoidably affect tree limbs, the Contractor shall notify the Engineer and the City Arborist at least five working days in advance of commencing such operations.
  - 1. Before trimming any trees, the Contractor shall notify the Engineer and the City Arborist of the proposed method and the amount of trimming required.
  - 2. Trimming shall be done by a professional tree service company whose past and current performance is in accordance with National Arborist Association tree-pruning standards.

### 3.03 EXCAVATION AND TRENCHING WITHIN CRITICAL ROOT ZONE

- A. Excavation or trenching of any kind within the critical root zone of trees to remain shall not be allowed unless the Contractor requests permission to do so at least two working days in advance and receives approval of the Engineer. The critical root zone is defined as an area surrounding the tree trunk with radius measuring one foot for each inch of tree trunk diameter at breast height.
- B. Treatment of Roots: Excavation around roots 2 inches in diameter and greater requires handwork.
  - 1. Individual tree roots 2 inches or greater in diameter shall not be cut, but rather protected when within the drip-line of the tree.
  - 2. Tree roots smaller than 2 inches in diameter shall be cleanly cut flush with the edge of the excavation.
  - 3. Ripping or tearing of tree roots will not be allowed.

### 3.04 REPAIR, REPLACEMENT, AND PAYMENT FOR DAMAGE

- A. Trees or other plant material not ordered or designated to be removed but that are destroyed or irreparably damaged by

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Contractor operations as determined by the Engineer, shall be repaired or replaced by the Contractor in accordance with the Engineer's recommendations.

1. Replacements shall be of the same species and as nearly as possible of the same size as the trees to be replaced. The Owner has the option to request a substitute species, and move smaller replacement trees of equal value to the location of damaged trees.
  2. The Contractor shall allow two working days advance notice for inspection of nursery stock replacements by the Engineer and City Arborist.
- B. Payment: In addition to the Contractor's restoration approved by the Engineer, the Contractor will be assessed damages for the difference in the dollar value of the damaged tree, shrub, or other plant material, and the dollar value of the replacement.
1. The dollar value will be determined by the Engineer from the "Guide for Establishing Values of Trees and Other Plants," prepared by the Council of Tree and Landscape Appraisers, current edition. Damages assessed will be deducted from moneys due or that may become due to the Contractor.
- C. Planting of replacement stock shall be done in accordance with the requirements of the Contract Documents during the first fall or spring planting period, whichever comes first.

**END OF SECTION 01533**

**END OF DIVISION ONE**